

## CLAIMS

- 5      1. Method for determination of characteristics and/or classification of circulating macrophages and/or peripheral mononuclear blood cells comprising the steps of:

  - taking whole blood and gradient centrifugation for isolating macrophages,
  - perforation of said macrophage cells,
  - intracellular staining of said cells with at least one selected antibody and
  - 10      - flow cytometric analysis of said pre-treated cells comprising subsequent statistical evaluation of a plurality of cells.
- 15      2. Method of claim 1, characterized by the use of prostate-specific antigen (PSA), cytokeratin and/or epithelial membrane antigen as said selected antibody/ies.
- 20      3. Method of claim 1 or 2, characterized by histogram analysis of the isotype control and staining after carrying out flow cytometry.
- 25      4. Method of any of the preceding claims for detecting parts of tissue cells uptaken by phagocytosis of a scattered prostate tumor outside the human body.
- 30      5. Method of claim 4, characterized in that it is determined by said staining of PSA in said macrophages, whether said material taken up by phagocytosis is prostate relevant.
6. Analysis arrangement for carrying out said method of any of the preceding claims, comprising means for heparinizing drained blood, a gradient centrifuge for isolating macrophages, means for cell perforation, a device for intracellular staining of said

pre-treated cells with fluorochrome antibodies and a flow cytometer comprising a computer supported evaluation unit for determining the intracellular structure of the isolated and pretreated cell for the purpose of early diagnostic of tumors.